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Osage County is located in eastern Kansas, due south of Topeka. It is close to the scenic Flint Hills, and its history includes the Santa Fe Trail and Santa Fe Railroad. A trip to downtown Lyndon Kansas is like a refreshing trip to the past. There are no stop lights, no fast food joints, and no Wal-Mart. A brochure from the local Economic Development Corporation advertises "Welcome to the Slow Lane," with "rush hour" being the movement of cows across the field.

But appearances can be deceiving. This quiet county seat of agricultural Osage County is a technological pioneer, being one of the first to implement GIS in everyday FSA operations. A map of the United States in their conference room is loaded with pins. They represent the many visitors from around the nation who have come to learn from the Osage County example.

The success of GIS at the county level is dependent upon the initiative of a few highly motivated people. One of these is Osage County's program technician Idonna Corwine. As she explains it, in 1991 the county began exploring the possibility of implementing a GIS system. Osage was the first county in the Kansas initiative PRISM (Property, Resources, Information Systems Management). In 1994, the county requested a waiver from the traditional method of operating, with the goal of converting to a digital system. By January of 1995, they were able to begin using a GIS setup, initially using GRASS. Farmers were sent maps showing digitized field boundaries superimposed upon imagery containing their farms. They were asked to verify the acreage for their operations.

Converting to a digital system has not been easy; it has required many hours beyond the established work day, and the staff has learned from its mistakes. But they have already seen an enormous time savings. When a county receives new enlargements from APFO, it can take a year or more to transfer the field boundaries onto the new prints. Temporary workers were often hired for this purpose. Digitizing the field boundaries in a GIS system also involves an initial outlay of time but, at present, this is being done by the digitizing centers rather than county office staff. The county officer can digitize any changes to a field or tract, and can then easily access the attribute table (tabular data associated with a spatial feature) containing records for that property. With the GIS system, records for tracts and fields can be updated easily, by clicking on the polygons representing the field boundaries, or by querying the database.

The real power of the GIS system lies in its ability to do spatial analysis. Idonna Corwine proudly shows off several examples of the creative application of GIS. Graphics of these time saving projects are conveniently mounted in the conference room to show visitors. One of the most interesting was the map of storm damage assessment. Using Global Positioning System (GPS), a map layer was made outlining those areas in the county with varying degrees of storm damage. This was then intersected with the field boundaries layer to generate reports of those farmers most affected by the storm.

Idonna envisions a bright future for GIS applications in Kansas and around the country, since, she explains, 80% of FSA programs begin with a map. Uses of this technology include customized maps for farmers, countywide analysis for programs, selling crop insurance, the CRP (Conservation Reserve) program, storm damage analysis, HEL (highly erodible land) determinations, measuring acreages of croplands and fields, and hydrological unit boundaries. Outreach will be an important factor, and she hopes to encourage ArcView users groups from the county offices. Osage County has developed a large training manual for other Kansas counties, and staff from twelve of these counties have gone to the State Office for training. The enthusiasm shown in Osage County can have a huge impact

Idonna Corwine and Osage County CEO Dean Supple show off the large number of visitors their office has received

on the success of this program in the state of Kansas and around the country.

Osage County also plays a role as a digitizing center. The Kansas State Director made the decision to move towards implementing a digital system in the state, and digitizing centers were initially established using GRASS (Geographic Resources Analysis Support System). This is a GIS system originally written by the Army Corps of Engineers for land management and environmental planning. They switched over to ArcView, partly because GRASS will only accept one attribute per polygon, while ArcView accepts multiple attributes. Some of the GRASS linework was copied into ArcView, but still needed to be attributed. At present there are two digitizing centers in Kansas, in Osage and Ellis Counties. Mosaics are sent from APFO to the state coordinator Scott Willbrant in Manhattan. He assigns them to one of the two centers. The center in Osage County employs five people to digitize field boundaries. A county in eastern Kansas would typically take three months to digitize. Counties in western Kansas, where the fields tend to be bigger, would take two months to complete. The digitized linework is returned to APFO, where topology is generated by Rodney Johnson, and the work's quality is checked in QA . The data is then ready for use, and Osage County is ready to train its neighbors in the new way of doing business.

After leaving the county office, the visitor can enjoy the county. The main crop in the area is soybeans. Osage is one of two counties in the nation with two federally created lakes, and it also has two state parks. With help from the new GIS system, Osage County can continue to move ahead in managing FSA programs, and can serve as an inspiration and example to other Service Centers.

Idonna and digitizer Ann Thoms demonstrate the digitizing process.

Linda McDonald, APFO Sales Branch Chief, observes digitizer Molly Joinerat work.